

ABSTRACT OF THE DISCLOSURE

8b/10b encoding begins when an input running disparity is received. The processing then continues by receiving an 8-bit digital input that includes a 5-bit digital input portion and a 3-bit digital input portion. The processing then continues by determining, in parallel, a 6-bit running disparity and a 4-bit running disparity. The processing then continues by determining a 6-bit digital output based on the 6-bit running disparity and the 5-bit digital input portion. The processing then continues by determining a 4-bit digital output based on the 4-bit running disparity and the 3-bit digital input portion. The resulting 10-bit encoded digital output is the combination of the 6-bit digital output and the 4-bit digital output.